



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/812,474	03/19/2001	Lenka M. Jelinek	5038-66	1631

7590 03/29/2004

MARGER JOHNSON & McCOLLOM, P.C.  
1030 S.W. Morrison Street  
Portland, OR 97205

EXAMINER

LE, DUY K

ART UNIT PAPER NUMBER

2685

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/812,474

Applicant(s)

JELINEK, LENKA M.

Examiner

Duy K Le

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, and 5-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Wood, Jr. (U.S. Patent 6,023,610).

As to claim 1, Figure 1 in Wood, Jr. shows a set (10) comprising:

an RF transponder (16) to use with a toy (“the radio frequency data communications device 12 includes a transponder 16 having a receiver 30 and a transmitter 32.” (Col. 3, lines 62-64). “The radio frequency data communication device 12 can be included in any appropriate housing or package” (Col. 4, lines 17-18). “There is a need for tag devices suitably configured to mount to a variety of objects including goods, items, persons, or animals, or substantially any moving or stationary and animate or inanimate object” (Col. 2, lines 6-9));

at least two antennas (X1, X2) to emit detection signals to the RF transponder (“the interrogator (26) communicates with the transponder 16 via the RF antennas X1, X2, ... , R1, R2 ... , etc.” (Col. 10, lines 21-23)); and

a multiplexer (78, Figure 7) coupled to the two antennas to activate a first one of the antennas at a different time interval than a second one of the antennas (“the RF circuitry 54 further includes a diversity switch 78, coupled to the power amplifier 76, for transmission of the amplified signal through a selected one of the two transmit antennas X1 and X2” (Col. 13, lines

29-32). "When the interrogator attempts communication with a transponder 16, the interrogator will first attempt communications using the data at the top of the queue 90; i.e., in the embodiment shown in FIG. 8, the interrogator will first attempt to use an antenna pair represented by data in the first or top row of the stack 90 (e.g., using transmit antenna X1 and receive antenna R1 in the illustrated embodiment). If successful communication is not established, the interrogator 26 will attempt communication using the antenna pair represented by data in the second row of the stack 90 (e.g., using transmit antenna X1 and receive antenna R2). If successful communication is still not established, the interrogator 26 will attempt communication using the antenna pair represented by data in the third row of the stack 90 (e.g., using transmit antenna X2 and receive antenna R1)" (Col. 14, lines 36-51). "Each attempt takes time. For example, in one embodiment, each attempt takes 20-40 milliseconds. Thus, in the illustrated embodiment, attempt 1 and attempt 2 fail, so 40-80 milliseconds are lost" (Col. 15, lines 4-7)).

As to claim 2, the Wood, Jr. reference discloses the set of claim 1, wherein the multiplexer is to activate periodically the first and the second antennas (see Col. 14, lines 36-51 and Col. 15, lines 4-7).

As to claim 5, the Wood, Jr. reference discloses the set of claim 1, wherein each of the antennas has a main axis, and the antennas are oriented such that their respective main axes are not parallel to each other ("in one embodiment, the transmit antenna X2 is oriented at an angle different from the angle of the transmit antenna X1" (Col. 14, lines 27-29)).

As to claim 6, the Wood, Jr. reference discloses the set of claim 1, wherein each of the antennas has a main axis, and the antennas are oriented such that their respective main axes are

substantially parallel to each other (“in a more particular embodiment, the transmit antenna X1 is spaced apart from the transmit antenna X2 by a distance of between one wavelength and ten wavelengths” (Col. 14, lines 19-22). See also Figure 1).

As to claim 7, the Wood, Jr. reference discloses the set of claim 1, wherein each of the antennas has a main plane, and the antennas are oriented such that their respective main planes are substantially parallel to each other, but they do not belong in the same plane (“in a more particular embodiment, the transmit antenna X1 is spaced apart from the transmit antenna X2 by a distance of between one wavelength and ten wavelengths” (Col. 14, lines 19-22). See also Figure 1).

As to claim 8, the Wood, Jr. reference discloses the set of claim 1, further comprising: a program adapted to determine which one of the two antennas receives a return signal from the RF transponder (“the host computer 48 includes an application program for controlling the interrogator 26 and interpreting responses, and a library of radio frequency identification device applications or functions” (Col. 5, lines 27-30). “A GetCrntAntenna function returns the current antenna set used to communicate with a device 12” (Col. 17, lines 59-60). “FIG. 8 illustrates a stack or queue 90 including locations holding data representing antennas X1, X2, R1, and R2. The stack or queue 90 defines an order in which antennas will be used to attempt communication” (Col. 13, lines 62-65)).

As to claim 9, Figure 1 in Wood, Jr. shows a set (10) comprising:

a toy figurine (12) including an RF transponder (“the radio frequency data communications device 12 includes a transponder 16 having a receiver 30 and a transmitter 32.” (Col. 3, lines 62-64). “The radio frequency data communication device 12 can be included in any

Art Unit: 2685

appropriate housing or package” (Col. 4, lines 17-18). “There is a need for tag devices suitably configured to mount to a variety of objects including goods, items, persons, or animals, or substantially any moving or stationary and animate or inanimate object” (Col. 2, lines 6-9));

at least two antennas (X1, X2) to emit respective first and second detection signals at different times from each other (“when the interrogator attempts communication with a transponder 16, the interrogator will first attempt communications using the data at the top of the queue 90; i.e., in the embodiment shown in FIG. 8, the interrogator will first attempt to use an antenna pair represented by data in the first or top row of the stack 90 (e.g., using transmit antenna X1 and receive antenna R1 in the illustrated embodiment). If successful communication is not established, the interrogator 26 will attempt communication using the antenna pair represented by data in the second row of the stack 90 (e.g., using transmit antenna X1 and receive antenna R2). If successful communication is still not established, the interrogator 26 will attempt communication using the antenna pair represented by data in the third row of the stack 90 (e.g., using transmit antenna X2 and receive antenna R1)” (Col. 14, lines 36-51));

an antenna reader (26) to receive a return signal from the RF transponder responsive to one of the first and second detection signals (“the interrogator 26 transmits an interrogation signal or command 27 (“forward link”) via one of the antennas X1, X2, etc. The device 12 receives the incoming interrogation signal via its antenna 44. Upon receiving the signal 27, the device 12 responds by generating and transmitting a responsive signal or reply 29 (“return link”)” (Col. 5, lines 45-51)).

As to claims 10 and 14, the Wood, Jr. reference (Figure 7) discloses the set, further comprising:

an antenna driver (90) (“the stack or queue 90 defines an order in which antennas will be used to attempt communication” (Col. 13, lines 63-65)); and

a multiplexer (78) to receive a single antenna drive signal from the antenna driver, and to direct the antenna drive signal alternatingly between the first antenna and the second antenna to cause them to emit the first and second detection signals (“the RF circuitry 54 further includes a diversity switch 78, coupled to the power amplifier 76, for transmission of the amplified signal through a selected one of the two transmit antennas X1 and X2” (Col. 13, lines 29-32)).

As to claim 11, the Wood, Jr. reference discloses the set of claim 9, further comprising: a program adapted to determine an identity of the toy figurine (“an Identify function is used when attempting to determine the identification of one or more of the devices 12. Each device 12 has its own identification number “TagId”. It is possible that the interrogator will receive a garbled reply if more than one tag responds with a reply. If replies from multiple tags are received, an arbitration scheme is used to isolate a single device 12” (Col. 16, lines 41-47)).

As to claim 12, the Wood, Jr. reference discloses the set of claim 9, further comprising: a program adapted to determine a location of the toy figurine (“the host computer 48 includes an applications program for controlling the interrogator 26 and interpreting responses” (Col. 5, lines 27-29). “Upon receiving the signal 27, the device 12 responds by generating and transmitting a responsive signal or reply 29 (“return link”)” (Col. 5, lines 49-51). “Other embodiments are possible for the device 12, such as cellular telephone embodiments, or embodiments that include global positioning circuitry” (Col. 5, lines 57-59)).

As to claim 13, Figure 1 in Wood, Jr. shows a set for use with a program comprising:  
a play device (20);

at least two antennas (X1, X2) to emit respective first and second detection signals at different time intervals, the antennas positioned at first and a second antenna locations of the play device respectively (“the RF circuitry 54 further includes a diversity switch 78, coupled to the power amplifier 76, for transmission of the amplified signal through a selected one of the two transmit antennas X1 and X2” (Col. 13, lines 29-32). “When the interrogator attempts communication with a transponder 16, the interrogator will first attempt communications using the data at the top of the queue 90; i.e., in the embodiment shown in FIG. 8, the interrogator will first attempt to use an antenna pair represented by data in the first or top row of the stack 90 (e.g., using transmit antenna X1 and receive antenna R1 in the illustrated embodiment). If successful communication is not established, the interrogator 26 will attempt communication using the antenna pair represented by data in the second row of the stack 90 (e.g., using transmit antenna X1 and receive antenna R2). If successful communication is still not established, the interrogator 26 will attempt communication using the antenna pair represented by data in the third row of the stack 90 (e.g., using transmit antenna X2 and receive antenna R1)” (Col. 14, lines 36-51));

a first toy to place on the play device including a first RF transponder to generate a first return signal in response to the first detection signal; and a second toy to place on the play device including a second RF transponder to generate a second return signal in response to the second detection signal (“in the embodiment illustrated in FIG. 1, multiple devices 12 can be employed; however, there is no communication between multiple devices 12. Instead, the multiple devices 12 communicate with the interrogator 26” (Col. 5, lines 62-65). “The radio frequency data communications device 12 includes a transponder 16 having a receiver 30 and a transmitter 32.”



(Col. 3, lines 62-64). "The radio frequency data communication device 12 can be included in any appropriate housing or package" (Col. 4, lines 17-18). "There is a need for tag devices suitably configured to mount to a variety of objects including goods, items, persons, or animals, or substantially any moving or stationary and animate or inanimate object" (Col. 2, lines 6-9));

wherein the program is adapted to identify the first return signal with the first toy and the second return signal with the second toy ("an Identify function is used when attempting to determine the identification of one or more of the devices 12. Each device 12 has its own identification number "TagId". It is possible that the interrogator will receive a garbled reply if more than one tag responds with a reply. If replies from multiple tags are received, an arbitration scheme is used to isolate a single device 12" (Col. 16, lines 41-47)).

As to claim 15, the Wood, Jr. reference discloses the set of claim 13, wherein the program is adapted to determine first and second locations relative to the play device for the first and the second toys from the first and second return signals, respectively ("in the embodiment illustrated in FIG. 1, multiple devices 12 can be employed. The multiple devices 12 communicate with the interrogator 26" (Col. 5, lines 62-65). "Upon receiving the signal 27, the device 12 responds by generating and transmitting a responsive signal or reply 29 ("return link")" (Col. 5, lines 49-51). "In one embodiment, the responsive signal 29 is encoded with information that uniquely identifies, or labels the particular device 12 that is transmitting, so as to identify any object or person with which the device 12 is associated. Other embodiments are possible for the device 12, such as cellular telephone embodiments, or embodiments that include global positioning circuitry" (Col. 5, lines 53-59)).

As to claim 16, the Wood, Jr. reference discloses the set of claim 13, wherein

the first RF transponder has a first response characteristic; the second RF transponder has a second response characteristic different from the first response characteristic, and the program is further adapted to determine which of the first and second toys is at the first location. ("in the embodiment illustrated in FIG. 1, multiple devices 12 can be employed. The multiple devices 12 communicate with the interrogator 26" (Col. 5, lines 62-65). "Upon receiving the signal 27, the device 12 responds by generating and transmitting a responsive signal or reply 29 ("return link")" (Col. 5, lines 49-51). "In one embodiment, the responsive signal 29 is encoded with information that uniquely identifies, or labels the particular device 12 that is transmitting, so as to identify any object or person with which the device 12 is associated. Other embodiments are possible for the device 12, such as cellular telephone embodiments, or embodiments that include global positioning circuitry" (Col. 5, lines 53-59)).

As to claim 17, the Wood, Jr. reference discloses the set of claim 9, wherein the RF transponder is detachably connected to the toy figurine ("the radio frequency data communications device 12 includes a transponder 16 having a receiver 30 and a transmitter 32." (Col. 3, lines 62-64). "The radio frequency data communication device 12 can be included in any appropriate housing or package" (Col. 4, lines 17-18)).

As to claim 18, Figure 1 in Wood, Jr. reference shows an article (48) comprising: a storage medium, said storage medium having stored thereon instructions ("the host computer 48 includes an application program for controlling the interrogator 26 and interpreting responses, and a library of radio frequency identification device applications or functions" (Col. 5, lines 27-30). "In one embodiment, the host computer 48 and the interrogator 26 are combined together

Art Unit: 2685

(e.g., in a common housing)” (Col. 5, lines 34-36)), that, when executed by at least one device, result in:

emitting a first detection signal from a first antenna; emitting a second detection signal from a second antenna at a different time interval than emitting the first detection signal (“when the interrogator attempts communication with a transponder 16, the interrogator will first attempt communications using the data at the top of the queue 90; i.e., in the embodiment shown in FIG. 8, the interrogator will first attempt to use an antenna pair represented by data in the first or top row of the stack 90 (e.g., using transmit antenna X1 and receive antenna R1 in the illustrated embodiment). If successful communication is not established, the interrogator 26 will attempt communication using the antenna pair represented by data in the second row of the stack 90 (e.g., using transmit antenna X1 and receive antenna R2). If successful communication is still not established, the interrogator 26 will attempt communication using the antenna pair represented by data in the third row of the stack 90 (e.g., using transmit antenna X2 and receive antenna R1)” (Col. 14, lines 36-51));

receiving a return signal from an RF transponder in response to one of the first and second detection signals (“the interrogator 26 transmits an interrogation signal or command 27 (“forward link”) via one of the antennas X1, X2, etc. The device 12 receives the incoming interrogation signal via its antenna 44. Upon receiving the signal 27, the device 12 responds by generating and transmitting a responsive signal or reply 29 (“return link”)” (Col. 5, lines 45-51)); and

determining which one of the first and second antennas received the return signal (“a GetCrntAntenna function returns the current antenna set used to communicate with a device 12”

(Col. 17, lines 59-60). "FIG. 8 illustrates a stack or queue 90 including locations holding data representing antennas X1, X2, R1, and R2. The stack or queue 90 defines an order in which antennas will be used to attempt communication" (Col. 13, lines 62-65)).

As to claims 19 and 25, the Wood, Jr. reference discloses the article of claim 18 and the method of claim 22, comprising:

determining a response characteristic of the return signal; and matching the determined response characteristic with a response characteristic stored in a memory ("an Identify function is used when attempting to determine the identification of one or more of the devices 12. Each device 12 has its own identification number "TagId". It is possible that the interrogator will receive a garbled reply if more than one tag responds with a reply. If replies from multiple tags are received, an arbitration scheme is used to isolate a single device 12" (Col. 16, lines 41-47). See also "Details of Arbitration" in Col. 18, line 21 to Col. 19, line 20).

As to claim 20, the Wood, Jr. reference discloses the article of claim 18, wherein the instructions further result in: determining which antenna provided the return signal ("A GetCrntAntenna function returns the current antenna set used to communicate with a device 12" (Col. 17, lines 59-60). "FIG. 8 illustrates a stack or queue 90 including locations holding data representing antennas X1, X2, R1, and R2. The stack or queue 90 defines an order in which antennas will be used to attempt communication" (Col. 13, lines 62-65). "An Identify function is used when attempting to determine the identification of one or more of the devices 12. Each device 12 has its own identification number "TagId". It is possible that the interrogator will receive a garbled reply if more than one tag responds with a reply. If replies from multiple tags are received, an arbitration scheme is used to isolate a single device 12" (Col. 16, lines 41-47)).

As to claim 21, the Wood, Jr. reference discloses the article of claim 20, wherein the instructions further result in: looking up a location of the antenna that provided the return signal (“the host computer 48 includes an applications program for controlling the interrogator 26 and interpreting responses” (Col. 5, lines 27-29). “Upon receiving the signal 27, the device 12 responds by generating and transmitting a responsive signal or reply 29 (“return link”)” (Col. 5, lines 49-51). “Other embodiments are possible for the device 12, such as cellular telephone embodiments, or embodiments that include global positioning circuitry” (Col. 5, lines 57-59)).

As to claim 22, the Wood, Jr. reference discloses a method comprising:

emitting a first detection signal from a first antenna; emitting a second detection signal from a second antenna at a different time interval than emitting the first detection signal (“when the interrogator attempts communication with a transponder 16, the interrogator will first attempt communications using the data at the top of the queue 90; i.e., in the embodiment shown in FIG. 8, the interrogator will first attempt to use an antenna pair represented by data in the first or top row of the stack 90 (e.g., using transmit antenna X1 and receive antenna R1 in the illustrated embodiment). If successful communication is not established, the interrogator 26 will attempt communication using the antenna pair represented by data in the second row of the stack 90 (e.g., using transmit antenna X1 and receive antenna R2). If successful communication is still not established, the interrogator 26 will attempt communication using the antenna pair represented by data in the third row of the stack 90 (e.g., using transmit antenna X2 and receive antenna R1)” (Col. 14, lines 36-51)); and

receiving a return signal from an RF transponder in response to one of the first and second detection signals (“the interrogator 26 transmits an interrogation signal or command 27

Art Unit: 2685

("forward link") via one of the antennas X1, X2, etc. The device 12 receives the incoming interrogation signal via its antenna 44. Upon receiving the signal 27, the device 12 responds by generating and transmitting a responsive signal or reply 29 ("return link") (Col. 5, lines 45-51)).

As to claim 23, the Wood, Jr. reference discloses the method of claim 22, further comprising:

receiving a single antenna drive signal; and multiplexing the antenna drive signal between the first antenna and the second antenna ("the stack or queue 90 defines an order in which antennas will be used to attempt communication" (Col. 13, lines 63-65). "The RF circuitry 54 further includes a diversity switch 78, coupled to the power amplifier 76, for transmission of the amplified signal through a selected one of the two transmit antennas X1 and X2" (Col. 13, lines 29-32). See also Figure 7).

As to claim 24, the Wood, Jr. reference discloses the method of claim 22, further comprising:

determining a location of the RF transponder from the return signal ("the host computer 48 includes an applications program for controlling the interrogator 26 and interpreting responses" (Col. 5, lines 27-29). "Upon receiving the signal 27, the device 12 responds by generating and transmitting a responsive signal or reply 29 ("return link")" (Col. 5, lines 49-51). "Other embodiments are possible for the device 12, such as cellular telephone embodiments, or embodiments that include global positioning circuitry" (Col. 5, lines 57-59)).

As to claim 26, the Wood, Jr. reference discloses the method of claim 22, wherein multiplexing the antenna drive signal is performed periodically (see Col. 14, lines 36-51 and Col. 15, lines 4-7).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,023,610 to Wood, Jr. in view of Hino et al. (U.S. Patent Application Publication 2001/0011012 A1).

As to claims 3 and 4, the Wood, Jr. reference discloses the set of claim 1. However, it does not expressly disclose the antennas are coil antennas, wherein the coil antennas have single turn coils. The Hino reference teaches the antennas are coil antennas, wherein the coil antennas have single turn coils ("as shown in FIGS. 4 and 5, the non-contact IC module, which in a tag shape, has a radio-communication coil antenna 3 of aluminum or copper, for example, formed on a flexible sheet" (page 3, paragraph [0062], lines 1-4).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the set of Wood, Jr. wherein the antennas are coil antennas, and the coil antennas have single turn coils, as taught by Hino, in order to have easy detection of an accessed object.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Stobbe et al. (U.S. Patent 6,538,560) discloses keyless device for controlling access to automobiles and keyless method for checking access authorization.
- b. Callaway, Jr. (U.S. Patent Application Publication 2002/0106995 A1) discloses antenna system for a wireless information device.
- c. Akaiwa (U.S. Patent 5,097,484) discloses diversity transmissions and reception method and equipment.
- d. Ali (U.S. Patent 6,539,229) discloses system and method for mobile location detection in synchronous wireless systems.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duy K Le whose telephone number is 703-305-5660. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F Urban can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



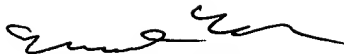
Application/Control Number: 09/812,474

Page 16

Art Unit: 2685

Duy Le

March 11, 2004

  
EDWARD F. URBAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2300